

REMARKS

The allowability of claim 8 subject to its presentation in independent form is appreciatively noted by the applicants. However, as will become evident from the following discussion, all pending claims herein are in condition for allowance and official notice to that effect is solicited.

Prior claims 1-5, 7 and 10 attracted a rejection under 35 USC §103(b) as allegedly anticipated by USP 5,777,166 (hereinafter "'166"). Separately, prior claims 6, 9 and 11 attracted a rejection under 35 USC §103(a) as allegedly "obvious" from '166.

Applicants respectfully disagree with the Examiner's interpretation of '166. In this regard, '166 discloses a process for the hydrogenation of nitriles to amines. The process as defined in claim 1 of '166 includes step (b) which involves:

"exposing said catalyst to a nitrile in a liquid reaction medium which dissolves the nitrile along with at least one inorganic base selected from the group consisting of LiOH, NaOH, KOH, RbOH and CsOH and thereby hydrogenate said nitrile."

The meaning of the term liquid reaction medium is found on lines 47-51, column 3, of '166 which states:

"The hydrogenation reaction medium is preferably liquid. It contains at least one solvent capable of dissolving the nitrile substrate to be hydrogenated, it being known that this conversion takes place more readily when the substrate is in solution."

The reaction medium includes the reaction solvent and the alkaline base (column 6, lines 16-19). In a preferred aspect of the process according to '166, amine is

incorporated into the reaction medium (column 4, lines 5-7). Further, lines 28-30 of column 4 state:

"Once the composition of the reaction medium and the choice of catalyst have been decided on, these two components are mixed..."

Thus, it is clear that '166 discloses a process in which the amine, when present, **forms part of the reaction medium**. This interpretation is supported by dependent claims 10-12 of '166 which relate to the amine content of the liquid reaction medium. As the catalyst is exposed to the liquid reaction medium which contains **both** the hydroxide and amine, '166 thereby fails to disclose that the catalyst is contacted with at least a part of the hydroxide **prior to contacting the catalyst with the amine** as required by pending claim 1 of the present application.

Applicants note that the examiner refers to procedure disclosed in column 6 of '166¹ to support his assessment. However, while the procedure of '166 relates to the alkaline base being introduced, there is no disclosure that the introduction of the alkaline base occurs **prior to the amine**. In fact, the charges used in the procedure of '166 include a reaction medium containing both the amine (hexamethylenediamine) and the alkaline base. The person of ordinary skill in the art would appreciate that the term "charge" relates to the introduction of a single dose. Thus, reference to the introduction of the alkaline base would be understood to mean "introduction of the reaction medium" which includes the alkaline base (column 6, lines 16-19).

This interpretation is consistent with other previously mentioned disclosures in '166, including its claim 1 which indicates that the hydroxide and amine, when present, are present in the liquid reaction medium. As the liquid reaction medium is exposed to the catalyst, then the amine and hydroxide inherently contact the catalyst at the same

¹ Applicants are however unclear as to the meaning of the examiner's specific reference to line 10.

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time. Accordingly, accordingly applicants submit that pending claims 1-5, 7 and 10 cannot be anticipated by '166.

The comments above are equally germane to the unobviousness of the present invention as defined by claims 6, 9 and 11 over '166. In this regard, applicants note that a principal difference between the present invention and '166 relates to the fact that the catalyst is contacted with at least part of the hydroxide **prior to contacting the catalyst with the amine**. As stated on page 2, lines 1-6 of the present application, this distinctive feature provides the advantages of a higher selectivity of diamine formation with respect to the starting dinitrile, a lower impurity level and increased reaction speed compared to the prior art.

'166 (e.g., as stated in its claim 1) directs that the catalyst is contacted with the reaction medium. As previously discussed, the reaction medium includes the alkaline base and the amine, when present. Therefore, '166 directs away from contacting the catalyst with at least part of the hydroxide prior to contacting the catalyst with the amine. Accordingly, applicants also submit that the present invention is non-obvious in light of '166.

Withdrawal of all rejections of record and passage of this application to allowance is therefore solicited.

Respectfully submitted,

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